IN THE CLAIMS:

Claim 1 (currently amended): A self-cleaning method for a semiconductor exposure apparatus comprising a light source for emitting ultraviolet light for exposure, an optical system for guiding ultraviolet light emitted from the light source to an exposure mask on which an exposure pattern is formed, and a projection lens for projecting the exposure pattern to a subject to be processed, the method comprising:

arranging, at a position where the exposure mask is to be disposed, a transmittable plate for diffusing ultraviolet light guided by the optical system and irradiating the projection lens with it, ~~where~~ the transmittable plate ~~is~~ being made of a quartz glass plate having a lens-shaped concave portion on one surface thereof and bracelet-shaped concave lenses concentrically arranged on the other surface thereof; and

irradiating an entire surface of the projection lens with the ultraviolet light emitted from the light source and diffused by the transmittable plate to optically clean a surface of the projection lens, and

wherein the ~~self-cleaning~~ transmittable plate for self-cleaning includes a Fresnel lens made of a heat-resistant transparent resin.

Claims 2 and 3 (canceled).

Claim 4 (currently amended): A self-cleaning method for a semiconductor exposure apparatus comprising a light source for emitting ultraviolet light for exposure, an optical system for guiding ultraviolet light emitted from the light source to an exposure mask on which an exposure pattern is formed, and a projection lens for

projecting the exposure pattern to a subject to be processed, the method comprising the steps of:

arranging, at a position where the exposure mask is to be disposed, a transmittable plate for converging ultraviolet light guided by the optical system and irradiating the projection lens with it, wherein the transmittable plate is made of a quartz glass plate having a lens-shaped convex portion on one surface thereof and bracelet-shaped convex lenses concentrically arranged on the other surface thereof; and

irradiating a middle of the projection lens with the ultraviolet light emitted from the light source and converged by the transmittable plate to optically clean an inside of the projection lens, and

wherein the ~~self-cleaning~~ transmittable plate for self-cleaning includes a Fresnel lens made of a heat-resistant transparent resin.

Claims 5 and 6 (canceled).

Claim 7 (currently amended): A semiconductor exposure apparatus with a self-cleaning function comprising:

a light source for emitting ultraviolet light for exposure;

an exposure mask on which an exposure pattern is formed;

an optical system for guiding the ultraviolet light emitted from the light source to the exposure mask;

a projection lens for projecting the exposure pattern to a subject to be processed; and

a ~~self-cleaning~~ transmittable plate for self-cleaning being arranged at a position where the exposure mask is to be disposed to clean the projection lens with the ultraviolet light,

wherein the ~~self-cleaning~~ transmittable plate for self-cleaning diffuses or converts ultraviolet light guided by the optical system to irradiate the projection lens with the ultraviolet light, and

wherein the ~~self-cleaning~~ transmittable plate for self-cleaning is made of a quartz glass plate having a lens-shaped concave portion on one surface thereof and bracelet-shaped concave lenses concentrically arranged on the other surface thereof, and

wherein the ~~self-cleaning~~ transmittable plate for self-cleaning includes a Fresnel lens made of a heat-resistant transparent resin.

Claims 8 and 9 (canceled).

Claim 10 (currently amended): A semiconductor exposure apparatus with a self-cleaning function, comprising:

a light-source for emitting ultraviolet light for exposure;

an exposure mask on which an exposure pattern is formed;

an optical system for guiding the ultraviolet light emitted from the light source to the exposure mask;

a projection lens for projecting the exposure pattern to a subject to be processed; and

a ~~self-cleaning~~ transmittable plate for self-cleaning arranged at a position where the exposure mask is to be disposed to clean the projection lens with the ultraviolet light,

wherein the ~~self-cleaning~~ transmittable plate for self-cleaning diffuses or converts the ultraviolet light guided by the optical system to irradiate the projection lens with the ultraviolet light, and

wherein the ~~self-cleaning~~ transmittable plate for self-cleaning is made of a quartz glass plate having a lens-shaped ~~concave~~ convex portion on one surface thereof and bracelet-shaped ~~concave~~ convex lenses concentrically arranged on the other surface thereof, and

wherein the ~~self-cleaning~~ transmittable plate for self-cleaning includes a Fresnel lens made of a heat-resistant transparent resin.

Claim 11 (previously presented): A self-cleaning method according to claim 1, wherein the ultraviolet light is an ArF excimer light having a wavelength of 193 nm.

Claim 12 (previously presented): A self-cleaning method according to claim 1, wherein the ultraviolet light is an F2 light having a wavelength of 157 nm.

Claim 13 (previously presented): A self-cleaning method according to claim 4, wherein the ultraviolet light is an ArF excimer light having a wavelength of 193 nm.

Claim 14 (previously presented): A self-cleaning method according to claim 4, wherein the ultraviolet light is an F2 light having a wavelength of 157 nm.

Claim 15 (previously presented): A semiconductor exposure apparatus according to claim 7, wherein the ultraviolet light is an ArF excimer light having a wavelength of 193 nm.

Claim 16 (previously presented): A semiconductor exposure apparatus according to claim 7, wherein the ultraviolet light is an F2 light having a wavelength of 157 nm.

Claim 17 (previously presented): A semiconductor exposure apparatus according to claim 10, wherein the ultraviolet light is an ArF excimer light having a wavelength of 193 nm.

Claim 18 (previously presented): A semiconductor exposure apparatus according to claim 10, wherein the ultraviolet light is an F2 light having a wavelength of 157 nm.

Claim 19 (currently amended): A self-cleaning method according to claim 1, wherein the ~~self-cleaning~~ transmittable plate for self-cleaning includes a Fresnel lens made of a heat resistant transparent resin.

Claim 20 (currently amended): A self-cleaning method according to claim 4, wherein the ~~self-cleaning~~ transmittable plate for self-cleaning includes a Fresnel lens made of a heat-resistant transparent resin.

Claim 21 (currently amended): A semiconductor exposure apparatus according to claim 7, wherein the ~~self-cleaning~~ transmittable plate for self-cleaning includes a Fresnel lens made of a heat-resistant transparent resin.

Claim 22 (currently amended): A semiconductor exposure apparatus according to claim 10, wherein the ~~self-cleaning~~ transmittable plate for self-cleaning includes a Fresnel lens made of a heat-resistant transparent resin.